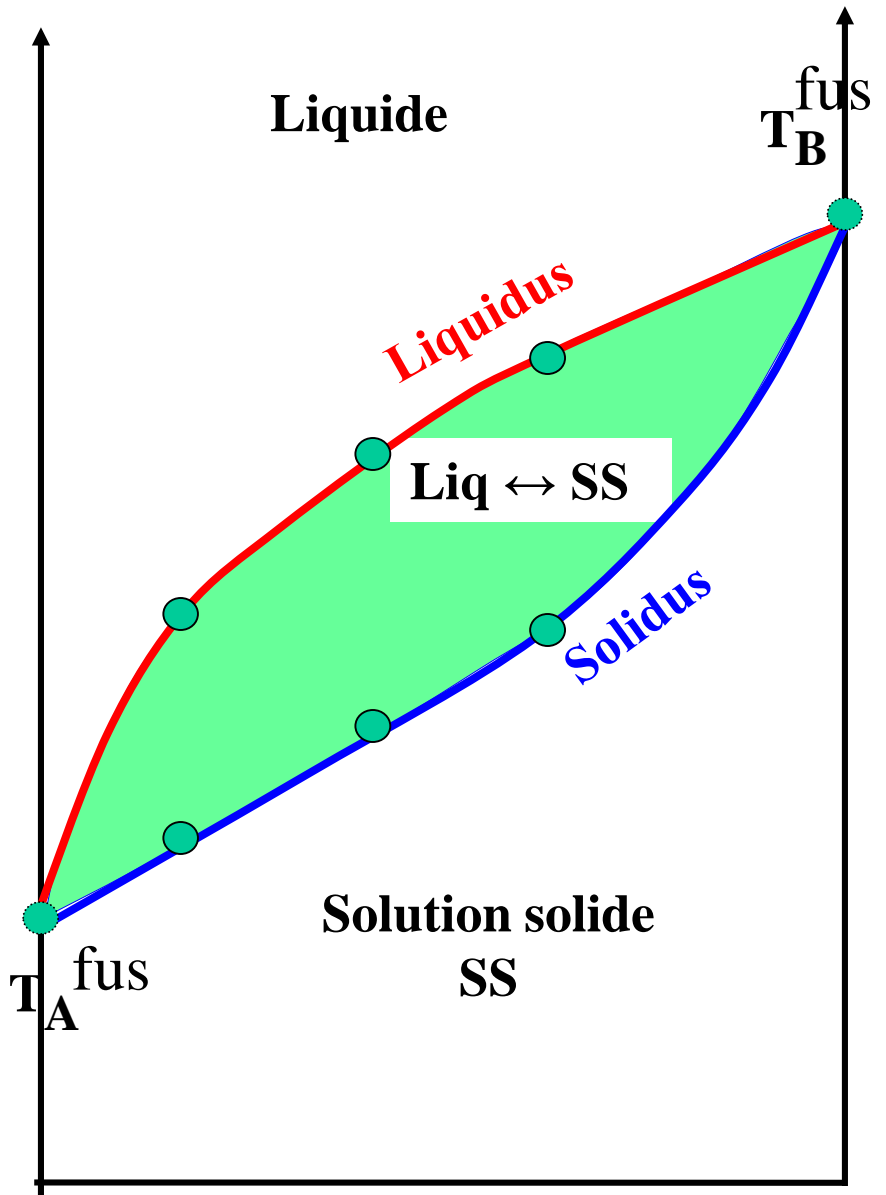


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Temps



A

B

Liquide

Liquidus

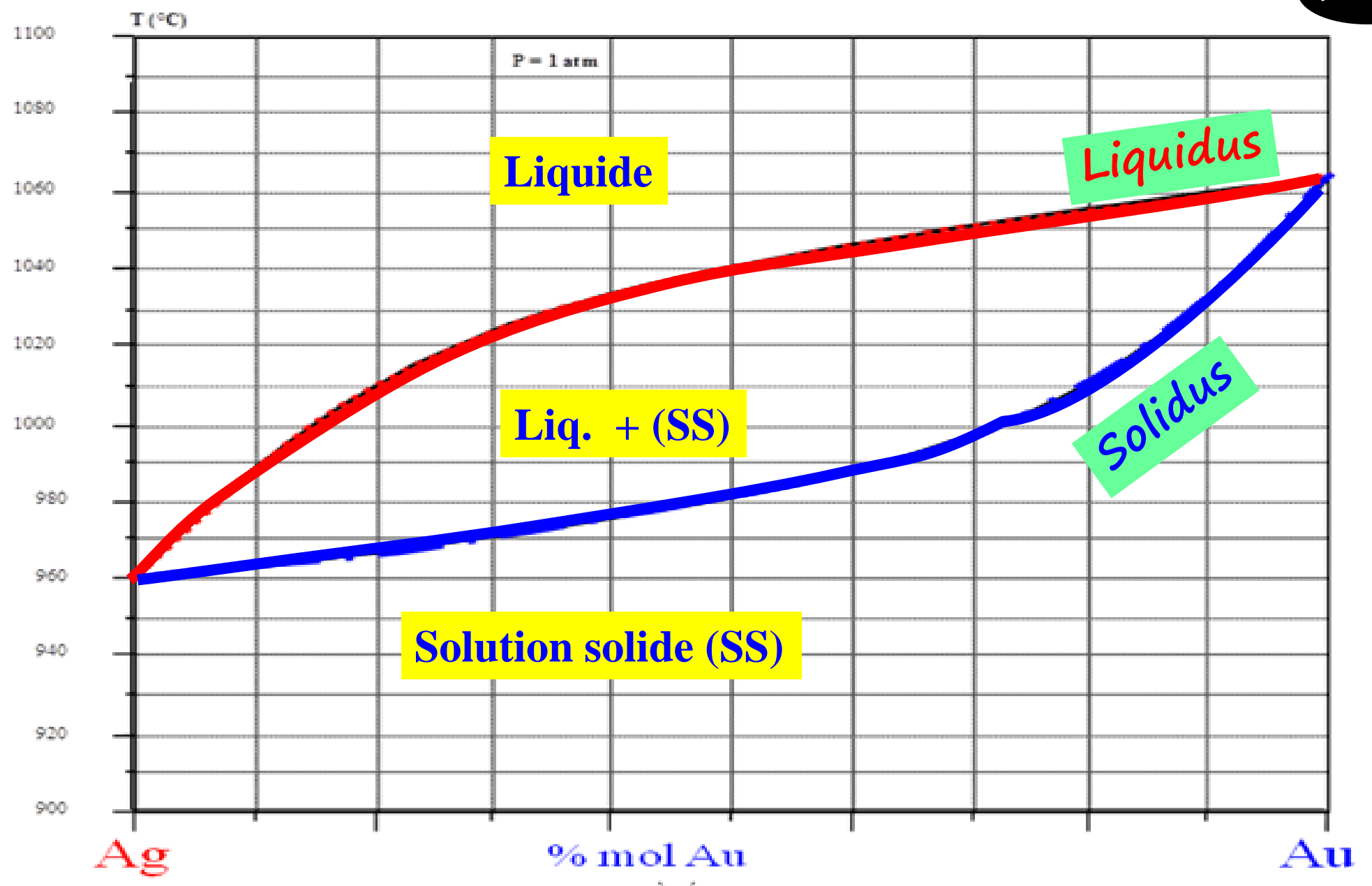
Liq \leftrightarrow SS

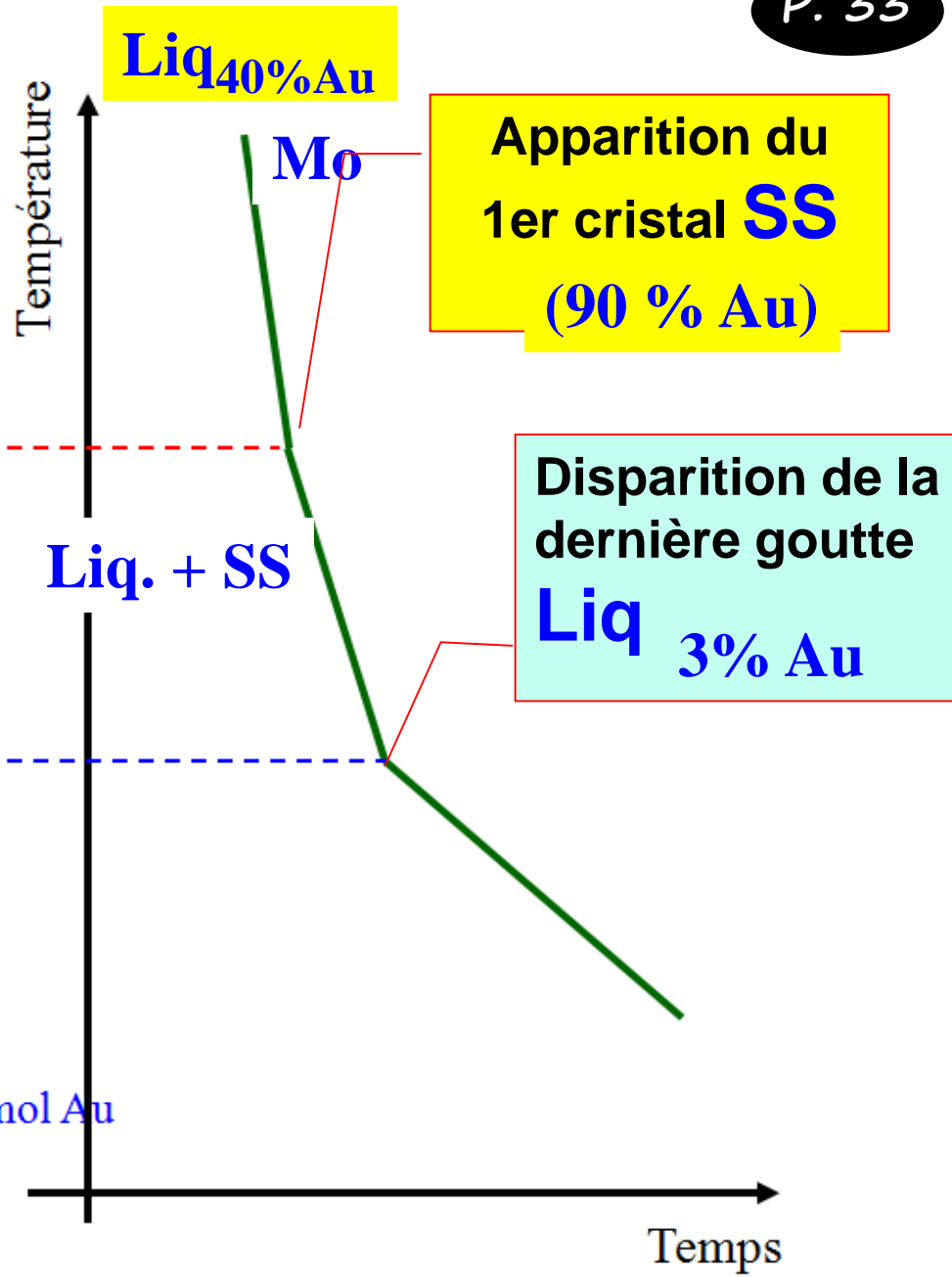
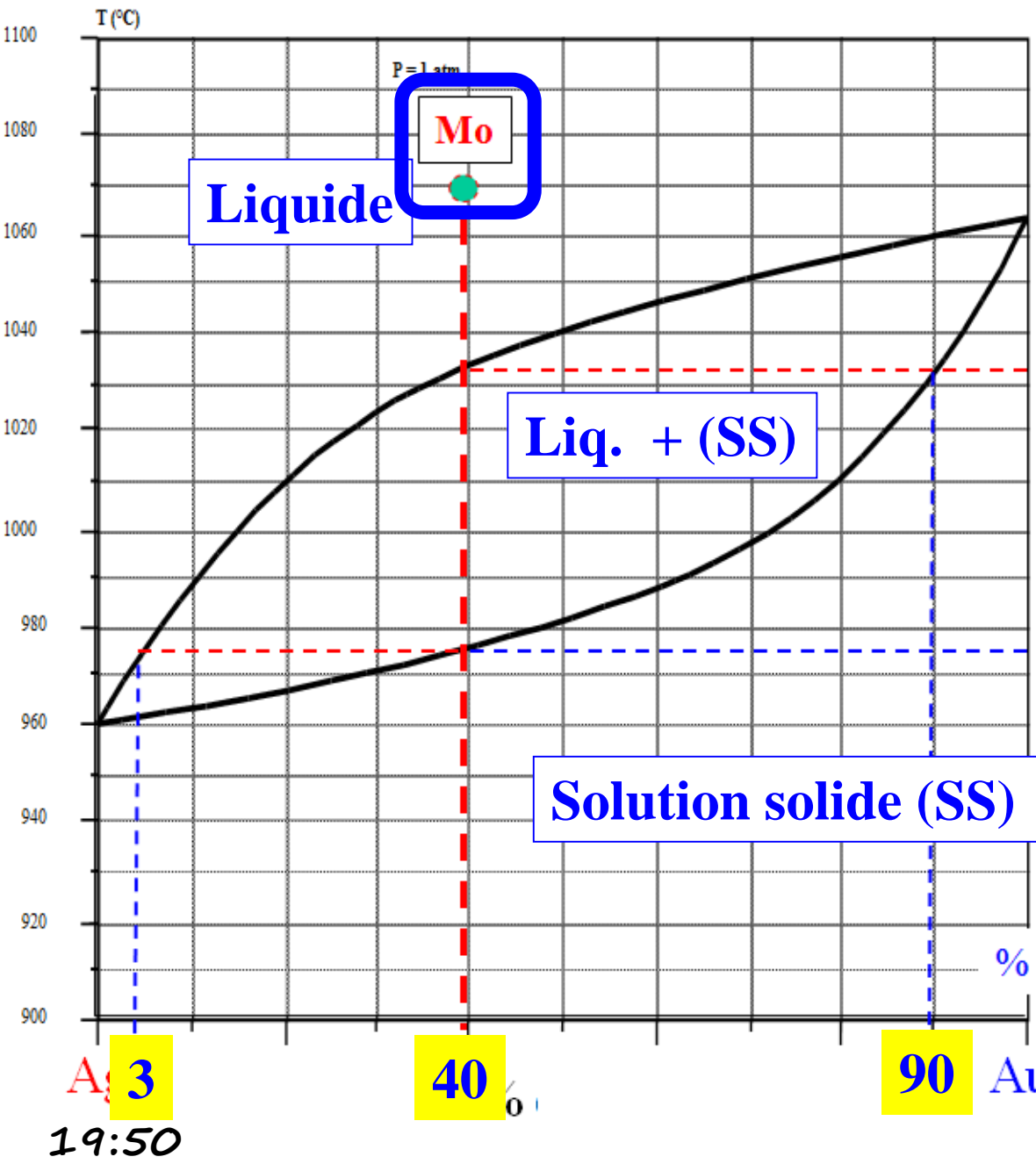
Solidus

Solution solide
SS

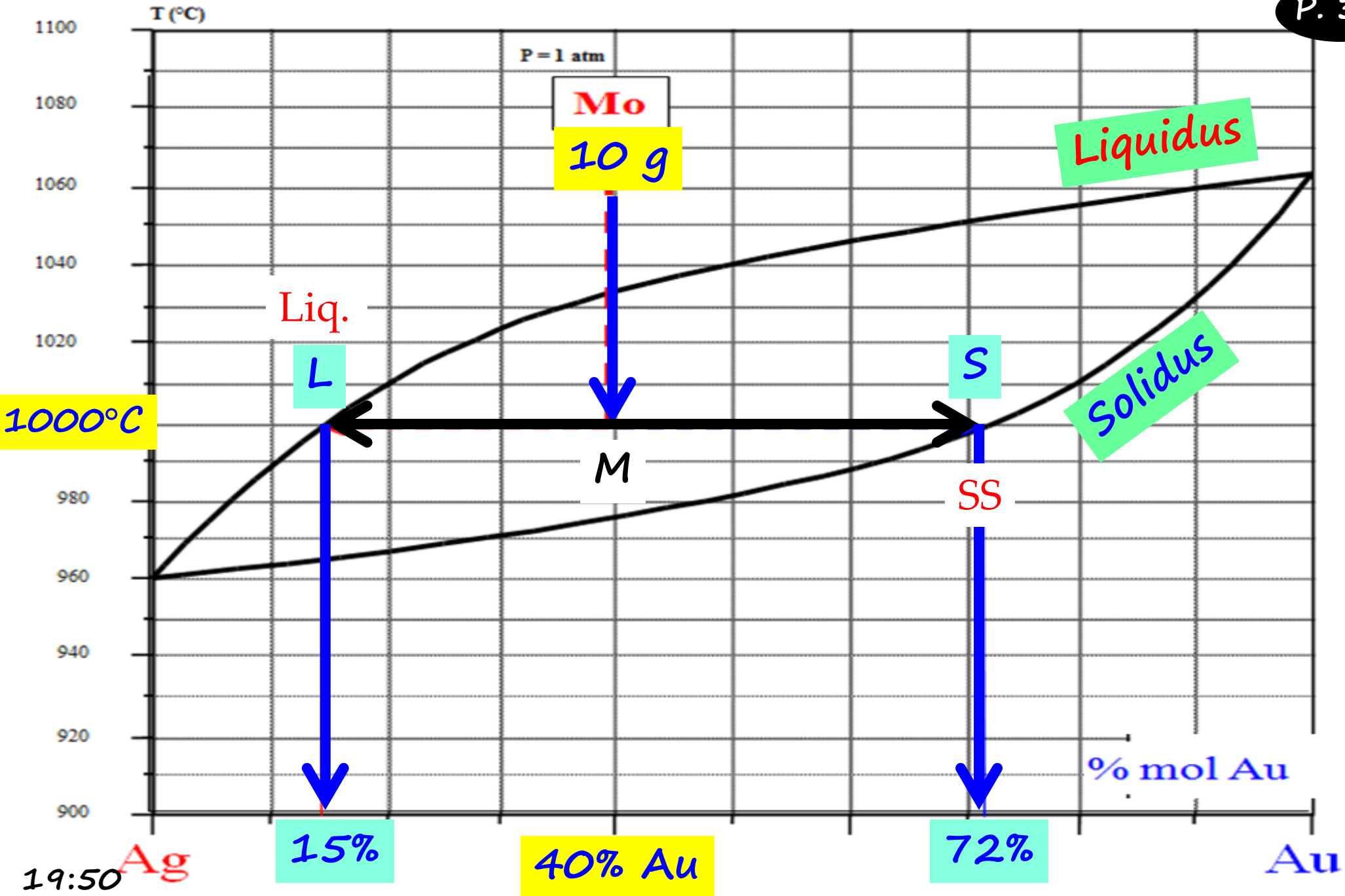
T_B^{fus}

T_A^{fus}

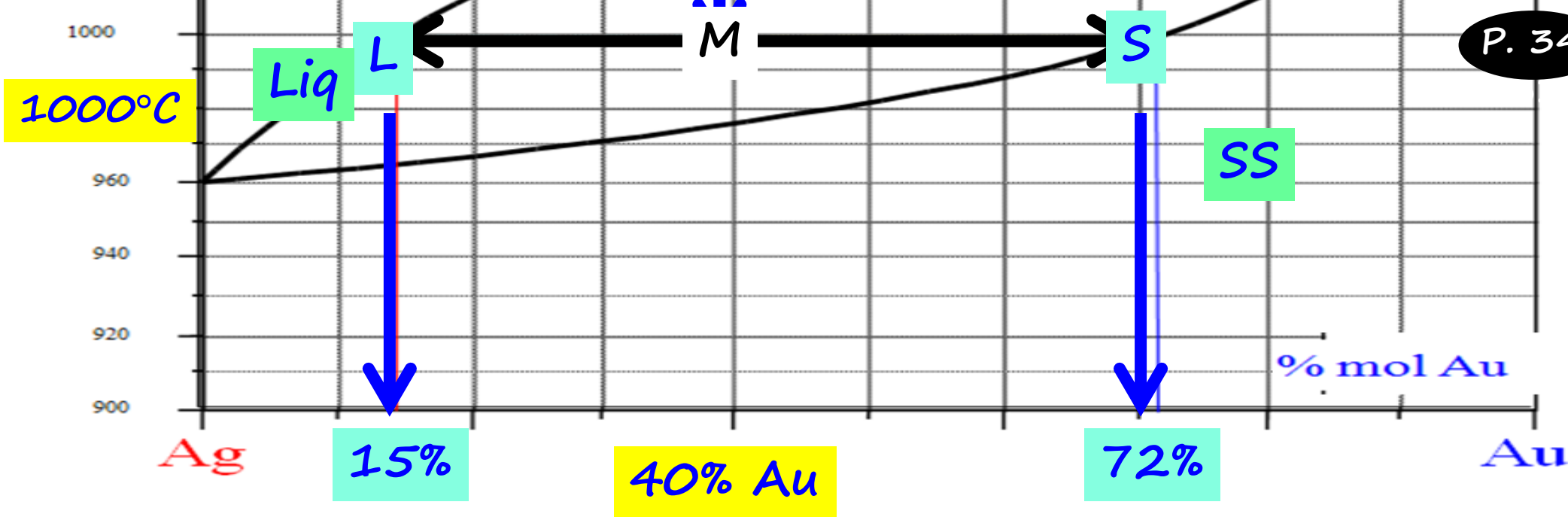




19:50



19:50



à $T=1000^{\circ}\text{C}$:

$$\frac{n_{\text{liq}}}{72-40} = \frac{n_{\text{SS}}}{40-15} = \frac{n_{\text{Liq}} + n_{\text{SS}}}{72-15}$$

$n_{\text{tot}} = (n_{\text{Liq}} + n_{\text{SS}})$ pour à un mélange de 10 g contenant 40%mol. Au)

$$n_{\text{tot}} = \frac{10}{M_{40\% \text{ mol. Au}}} = \frac{10}{0,40 \cdot M_{\text{Au}} + 0,60 \cdot M_{\text{Ag}}} = 0,07 \text{ moles}$$

$$\text{à } T=1000^{\circ}\text{C} : \frac{n_{\text{liq}}}{72-40} = \frac{n_{\text{SS}}}{40-15} = \frac{n_{\text{Liq}} + n_{\text{SS}}}{72-15}$$

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$$n_{\text{tot}} = \frac{10}{M_{40\% \text{ mol. Au}}} = \frac{10}{0,40 \cdot M_{\text{Au}} + 0,60 \cdot M_{\text{Ag}}} = 0,07 \text{ moles}$$

$$n_{\text{liq}} = 0,561 \cdot 0,07 = 0,039 \text{ mole}$$

$$\begin{aligned} m_{\text{liq}} &= n_{\text{liq}} \cdot M_{\text{liq}} = 0,039 \cdot M_{\text{liq}(15\% \text{ mol. Au})} \\ &= 0,039 \cdot (0,15 \cdot M_{\text{Au}} + 0,85 \cdot M_{\text{Ag}}) \end{aligned}$$

$$n_{\text{SS}} = 0,439 \cdot 0,07 = 0,031 \text{ mole}$$

$$\begin{aligned} m_{\text{SS}} &= n_{\text{SS}} \cdot M_{\text{SS}} = 0,031 \cdot M_{\text{SS}(72\% \text{ mol. Au})} \\ &= 0,031 \cdot (0,72 \cdot M_{\text{Au}} + 28 \cdot M_{\text{Ag}}) \end{aligned}$$

$$\text{Vérification: } m_{\text{SS}} + m_{\text{liq}} = 10 \text{ g}$$

Evolution de la masse molaire des mélanges

